



Self-Reliant Community; Environment Protection; Poverty Eradication; Sustainable Development.				
Local Bodies to Village/ Ward Level for Local-Self Governance				
Structural Deep Democracy (SD2) Page Rank Algorithm based Centrality/ Nexus of Trust Establishment.				
Integrated Plant Nutrition & Soil Management Systems IPN-SMS	Plant Protection Structures	Conservation Irrigation Micro-Irrigation Systems	Liquid & Solid Waste Management through Bioaugmentation	Intensive Horticulture/ Floriculture/ Orchard Management
Ecologically Safe Complete Plant Nutrition with Recycling for More Quantity & Quality Produce	Environment Protection	Sub-soil (Reticulation)	Rapid Composting	Growing; Packing and Marketing of Condiments and Spices: 100 gm packs Saunf; Zeera; Saffaron; Kalwangi; Haldi; Kaali Mirch; Laal Mirch
				Seabuckthorn: Oil; Twigs; Fodder; N Fixing
				Chilgoza Pine outside Monsoon Belt
Biological Soil Amendments & Management	Predator Protection	Drip Lines	Settlement Ponds	Solar Dryer for Agricultural Produce
				Sericulture
				Nutrition Enhancement
				Mushrooms
				Horticulture
				Fruit; Vegetables
Permanent; Sunken; No Till; Semi Hydroponics; Horticulture Beds Off-season Vegetable Production, Environment/				

Predator Protected Structures				
Microbe Management	Photo Period Control	Sprinkle – Rain Guns	Reed/ Plant Beds	Mushroom Spore Production & Growing Structures
			Artificial Wetlands	
Misting		Recycling		
Mini Earthworm Farms: Verimicompost		Karez Systems		No-Till Agriculture With Implements Manufacture
		Solar Powered Jack Pump: ¼; ½; 1 HP 1” – 8” Delivery		
Hydraulic Rams				
Surface/ Roof-top Water Harvesting & Filtration	Embryo Transplant: Livestock Management	Air Ionization/ Pollution Control	Alternate Energy:	Afforestation, & Protected Nurseries.
	Silage for Livestock			
	Fodder Production			
	Sheep Rearing for Wool & Meat			
	Beef Cattle Rearing and Packaged Meat			
	Marketing Dairy Farming & Dairy Products			
	Angora Sheep & Rabbits Rearing			
Deionization	Aquaculture		Methane	Range Management
	Incubators for Fish;			

	Raceways& Fish Ponds: Masher; Telapia			Watershed Management
Reverse Osmosis	Tissue Culture		Solar (Active & Passive)	
Activated Carbon	Turkey; Cornish Hen & Peking Duck Production for Export.;		Energy Domes for Methane/ Heat Energy; Water Recycling & Viruses/ Harmful Bacteria Control	
		Biothermal		
Alumina Filters for Fluorides	Incubators for Fowl/ Exotic Birds	Fountains	Salt Ponds for Thermal Energy	Aerial/ Truck Mounted Hydro Seed Mulching
Media Regeneration	Fowl/ Exotic Birds Rearing		Surface Mini- and Micro- hydropower	
		Industrial Grade Deionizers	Alcohol Fuel	
		Bio Diesel		
Earth Sheltered, Ceramic Adobe, Passive Solar Construction	Conglomoculture: Community Based Production & Marketing	Rapid Industrialization through Containerized Units & Central Training	Globalization Through Localization	Electronic Currency issued by:
Homes	Farming	Food Processing & Hand- line Canning	Participative Governance at Village/ Ward Level	Local Government
Cold Stores/ Stores	Processing	Cooked Food		Community Groups
		Dried Fruit for Export		
		Fruit Leathers		
		Value Addition		

Factory Buildings	Manufacture	Manufacture		Social Service Groups
Sheds	Marketing			Local Business Groups
Schools/ Hospitals				
Soil Management		Management & Expert Systems/ GIS		e-commerce
Sloping Agricultural Land Technology (SALT)		Globalization Through Localization		Governance
Soil Conservation through Soft & Hard Armoring and Poly Acrylamide.		Skills/ Technology Receiving & Transferring Centers		Participative Governance (Structural Deep Democracy SD2) at Village/ ward Level
		Web & Documentary Based Distance Vocational & Learning Centers		
Aquifer/ Water Resources Management		Training of Trainers		
Aerial & Ground Aquifer Survey & Mapping		Cottage Industry/ Self-Employment Skills (Cloth Weaving; Angora Wool & Silk Made-ups; Bags; Soft Furnishing; Shawl Weaving; Bed Linen Production Bridal Dresses; Gola Work; Embroidery; Dying; Phulkari etc.)		
Aquifer Management & Recharging		Entrepreneur Development		Micro Finance Bank
Aquifer Improvement		Technical Assistance		
Underground Reservoirs		Trouble Shooting		Emergency Medicine Training, Equipment & Provision
		Marketing Cell for Training		

## **Climate Resilience and Risk Management Strategies at the Regional, National, River-Basin, Trans Basin Flood Water Transfer and Aquifer Levels.**

### **The Activities of the Project Include:<sup>1</sup>**

- 1) Collection of existing field records and new satellite-based data on climate, hydrology and land-use in order to reconstruct the past and present situation;
- 2) Development of methodologies relating to down-scaling of climate change scenarios, hydrological modeling, glacial melt, climate impact assessment, climate vulnerability and risk analysis;
- 3) Modeling of future hydrology of the rivers and identification of water management problems considering agriculture, hydropower, environment and municipal water services;
- 4) Generating forecasts on climate change induced hazards as floods, droughts, mudflows, landslides and avalanches;
- 5) Presenting proposals for adaptation interventions and capacity building in order to increase climate resilience in different regions;
- 6) Development of capacity in the use and application of hydroclimatic models in the region.
- 7) Trans Basin Flood Water Transfer (Indus to Baluchistan Basin).

### **The Final Goal of the Project is to Support the Preparation of a National Strategy, Policies and Investment Plans for Climate Resilience.**

Increased Underground Reservoir capacity:

Improving agricultural practice:

Increased reuse of water in irrigated agriculture:

Increasing the reuse of water in domestic use:

Improving Irrigation Practices:

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<sup>1</sup> Regional Technical Assistance: Water and Adaptation Interventions in Central and West Asia

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